

HP StorageWorks Modular Smart Array 30 Multi Initiator Module Upgrade for HP-UX or Linux IA-64 Systems Installation Guide



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Contents

Abstract.....	5
Audience Assumptions	5
Overview	5
4-Port Shared Storage Module Components	6
Connectors.....	6
LEDs.....	7
SCSI ID Map.....	8
Upgrading the StorageWorks MSA30 Storage System Hardware.....	9
Cluster Configuration	11
Cluster Hardware Installation.....	11
Cluster Software Configuration.....	12
Configuration Tools and Utilities.....	12
Linux IA-64 Operating Systems.....	12
HP-UX Operating Systems.....	12
System Administration Manager.....	12

Abstract

This guide provides installation procedures for the 4-port Multi Initiator shared storage module to upgrade a single or dual bus HP StorageWorks Modular Smart Array 30 (MSA30) storage system.

IMPORTANT: This option is only available on systems running HP-UX or Linux IA-64 operating systems.

Audience Assumptions

This guide is for the person who installs, administers, and troubleshoots servers. HP assumes you are qualified in the servicing of computer equipment and trained in recognizing hazards in products with hazardous energy levels.

Overview

The 4-port Multi Initiator shared storage module enables data transfer through four SCSI ports, supports up to 14 drives, and has two ports per bus. Up to seven devices can be connected to each bus. Each bus requires its own host controller.

The shared storage module has an internal sensor that provides protection from power surges. If the current is too high, power to the module is discontinued. The module is then disabled until the sensor detects that the current has returned to normal.

NOTE: To support Ultra 320 speeds:

- The system must have both an Ultra320 shared storage Module and an Ultra320 Environmental Monitoring Unit (EMU)
- The hard drives and controllers must support Ultra320 speeds
- The firmware on the hard drives must be upgraded to ensure that the drives can also operate at Ultra320 speed.

For more information on the StorageWorks MSA30 storage system, refer to the *HP StorageWorks Modular Smart Array 30 User Guide*, on the StorageWorks Modular Smart Array 30 Documentation CD.

4-Port Shared Storage Module Components

Connectors

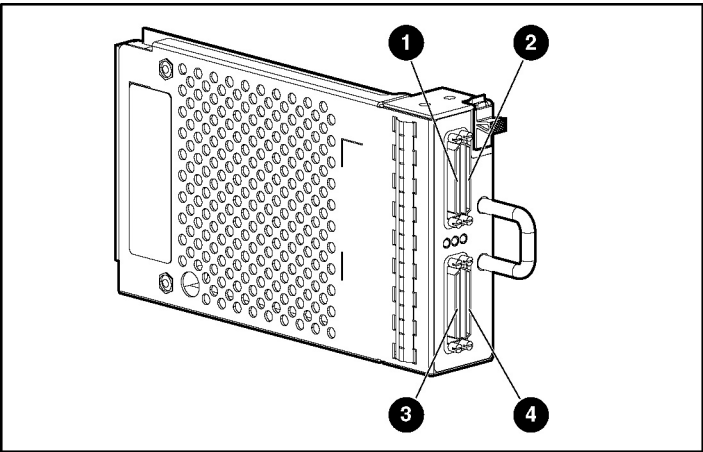


Figure -1: 4-port shared storage module connectors

Item	Description	Bus
1	SCSI port connector A1	A
2	SCSI port connector A2	A
3	SCSI port connector B1	B
4	SCSI port connector B2	B

LEDs

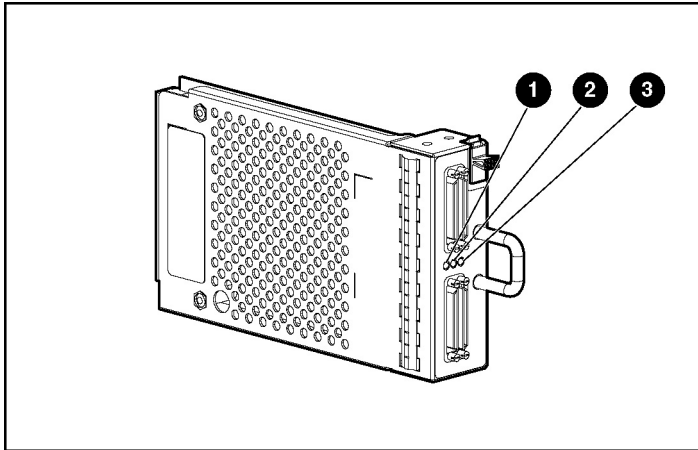


Figure -2: 4-port shared storage module LEDs

Item	Description	LED Status
1	Power	Green = Power on Off = Power off
2	SCSI host port A connectors 1 and 2	Flashing green = On/Activity Off = Off
3	SCSI host port B connectors 1 and 2	Flashing green = On/Activity Off = Off

SCSI ID Map

The 4-port shared storage module assigns a SCSI ID to each drive bay in the system.

Table 1: SCSI ID Map

Bay Number	SCSI ID	Bus
1	0	A
2	1	A
3	2	A
4	3	A
5	4	A
6	5	A
7	8	A
8	0	B
9	1	B
10	2	B
11	3	B
12	4	B
13	5	B
14	8	B

Upgrading the StorageWorks MSA30 Storage System Hardware



CAUTION: When replacing a component, take the following precautions to minimize the possibility of damage from electrostatic discharge.

- Transport and store components in static-free containers. Do not remove the component from the static-free container until you are ready to install it in the system.
 - Avoid touching connector pins, leads, or circuitry.
-

To install the 4-port shared storage module:

1. Back up the system.
2. Stop data transfers.
3. Power down the system and disconnect the AC power cord.
4. Disconnect the SCSI cables from the single or dual bus shared storage I/O module.
5. Remove the existing shared storage I/O module.

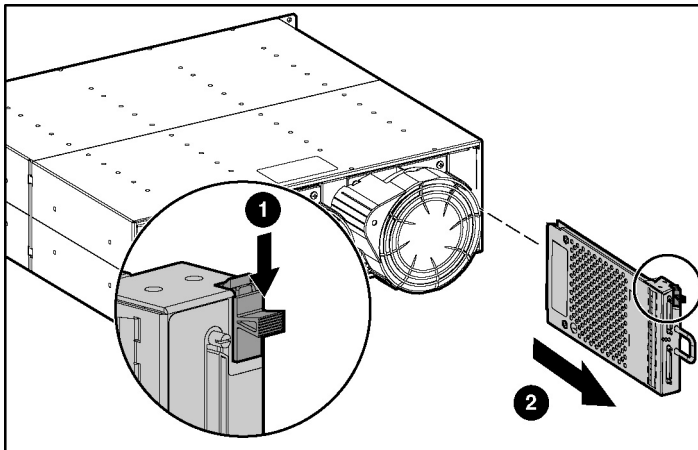
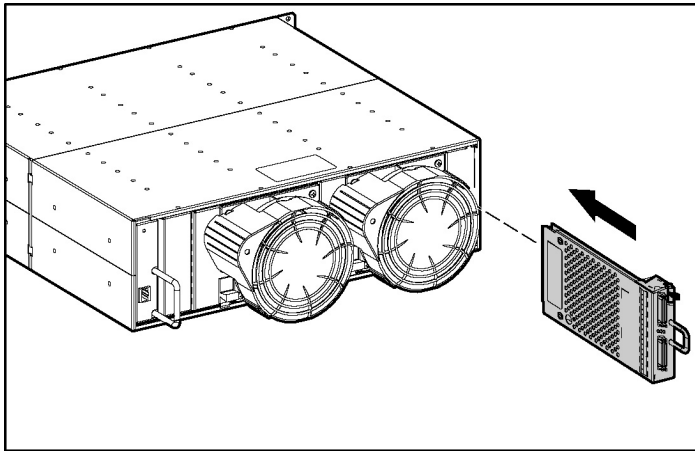


Figure 3: Removing an existing shared storage I/O module

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6. Install the 4-port Multi Initiator shared storage module.



7. Connect the SCSI cables to the new shared storage module.



CAUTION: To prevent damage to the cable connector, do not use excessive force to tighten the thumbscrews on the connector.

8. Reconnect AC power to the system.
9. Observe the shared storage module LEDs to confirm that the module is functioning properly.
10. Migrate backed up data.

Cluster Configuration

The StorageWorks MSA30 Multi Initiator upgrade supports clustering. Refer to the following sections for clustering procedures.

Cluster Hardware Installation

To install the cluster hardware:

1. Select an installation site that meets the optimum environment requirements. Refer to the server documentation for details.
2. Install the storage system into the rack. Refer to the *HP StorageWorks Modular Smart Array 30 Installation Overview* card, shipped with the storage system.
3. Install the servers into the rack, directly above the storage system. Refer to the server documentation for details.
4. Install options:
 - To install storage system options, refer to the *HP StorageWorks Modular Smart Array 30 User Guide*, available on the Documentation CD.
 - To install server options, refer to the server documentation or the documentation that ships with the option.
5. Cable the system:
 - a. Install the server cable management solution. Refer to the server documentation for details.
 - b. Connect the VHDCI SCSI cables to the storage system and servers.

For Linux IA-64 operating systems, connect the Ethernet crossover cable between the servers. Use the RJ-45 connectors identified as NIC 1 on each server.

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6. Connect peripheral devices, such as a keyboard, mouse, or monitor.

IMPORTANT: HP recommends the use of a KVM switchbox. Refer to the documentation that ships with the switchbox for installation instructions.

7. Connect the power cords.

IMPORTANT: HP recommends the use of an uninterruptible power supply (UPS). Contact the nearest authorized reseller.

Cluster Software Configuration

Cluster software configuration is done through the ServiceGuard tool. For information and procedures, refer to:

<http://docs.hp.com/hpux/ha/>

Configuration Tools and Utilities

Linux IA-64 Operating Systems

For information on the Linux IA-64 operating system, refer to:

<http://h10018.www1.hp.com/wwsolutions/linux/index.html>

HP-UX Operating Systems

For information on the HP-UX operating system and supported tools, refer to:

<http://www.hp.com/products1/unix/operating/index.html>

Click the Technical Documentation link on the left pane to access information on HP-UX tools, manpages, and other documentation.

System Administration Manager

The System Administration Manager (SAM) is an HP-UX tool that provides an easy-to-use user interface for performing setup and other essential tasks.

For more information, refer to *Managing Systems and Workgroups: A Guide for HP-UX System Administrators* at

<http://docs.hp.com/>

Select the version of HP-UX you are using and click the System Administration link.